

## **AMENDMENTS TO THE SPECIFICATION**

Please replace Paragraph [0031] in the application as published under U.S. Publication No. 2005/0103508 with the following paragraph rewritten in amendment format:

**[0031]** In a powered machine, the tool is a medium for the transfer of energy from the driver. Energy is transported in mechanical wave form; the ~~[[th]]~~ tool itself does not create or dissipate energy. However, energy can be ~~[[b]]~~ dissipated from a wave through the boundary between the tool and the immediate environment. For example, noise emanating from a powered tool is caused by decaying oscillations within the tool. Thus, an increase in oscillation decay translates to a reduction in noise.

Please replace Paragraph [0038] in the application as published under U.S. Publication No. 2005/0103508 with the following paragraph rewritten in amendment format:

**[0038]** To determine antinode positions from each mode shape, first the estimated node positions are determined, by multiplying the relevant coefficient by the ~~[[th]]~~ length measurement of the tool. Then ~~[[Th-n]]~~ the midpoint of the distance between two consecutive node positions along the mode shape is determined and each is taken to be an antinode position for that mode shape.

Please replace Paragraph [0039] in the application as published under U.S. Publication No. 2005/0103508 with the following paragraph rewritten in amendment format:

**[0039]** For example, for a tool having a length of 0.8 m, there is a first node 508 at the tip of shaped working end and two further node positions, second node position 509 and third node position 510. The second and third node positions 509, 510 are determined by multiplying the first node coefficient 511 and the second node coefficient 512 respectively by the

length measurement. For this example, second node position 509 occurs at 0.3568 m (0.446x0.8 m) (~~0.308x0.8 m~~) from the first node and third node position 510 occurs at 0.6824 m (0.853x0.8 m) from the first node 508. To find the two antinode positions, the midpoints between consecutive node positions of the same mode shape are determined. For this example, the first and second estimated antinode positions occur at 0.1784 m and 0.5196 m from the first node 508 respectively.

Please replace Paragraph [0041] in the application as published under U.S. Publication No. 2005/0103508 with the following paragraph rewritten in amendment format:

**[0041]** FIG. 6 shows the antinode positions along tool 501 derived from the first three harmonic mode shapes, shown at 504, 505 and 506 in FIG. 5; determined as described with reference to FIG. 5. Of the six antinode positions indicated along tool 501, position 601 is derived from the first harmonic (fundamental frequency) mode shape, positions 602 and 603 are derived from the ~~the~~ second harmonic mode shape and positions 604, 605 and 606 are derived from the third harmonic mode shape.

Please replace Paragraph [0048] in the application as published under U.S. Publication No. 2005/0103508 with the following paragraph rewritten in amendment format:

**[0048]** Equation 1001 is as follows. Multiply the Young's modulus (E) by the area moment of inertia of beam cross section (I). Divide the result of this multiplication by the mass density of beam material  $\rho$  ~~the~~, by the area of cross section of the beam (S), and by the length of the beam  $L$  ~~the~~ raised to the power of four (4). Take the square root of the result; the result of this is referred to as the first calculation result. Then divide the A coefficient from the relevant harmonic mode shape shown in FIG. 5 or other diagram by two (2) and by pi (.about.3.142). The result of this is referred to as the second calculation result. Then multiply the first

calculation result by the second calculation result to find the natural frequency ( $f_n$ ) for the relevant harmonic.